5040   #2

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RAW SEQUENCE LISTING   DATE: 02/25/2002
PATENT APPLICATION: US/10/049,182   TIME: 10:48:27

        Input Set : A:\36667.txt
        Output Set: N:\CRF3\02252002\J049182.raw

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      4 <110> APPLICANT: Banks, William A.
      6 <120> TITLE OF INVENTION: MODULATION OF THE BLOOD-BRAIN BARRIER TRANSPORTER FOR
      7       LEPTIN
      9 <130> FILE REFERENCE: 01017/35040
C--> 11 <140> CURRENT APPLICATION NUMBER: US/10/049,182
C--> 12 <141> CURRENT FILING DATE: 2002-02-08
     14 <160> NUMBER OF SEQ ID NOS: 6
     16 <170> SOFTWARE: PatentIn Ver. 2.0
     18 <210> SEQ ID NO: 1
     19 <211> LENGTH: 2793
     20 <212> TYPE: DNA
     21 <213> ORGANISM: Murine
     23 <220> FEATURE:
     24 <223> OTHER INFORMATION: Murine ob (leptin) cDNA
     26 <220> FEATURE:
     27 <221> NAME/KEY: CDS
     28 <222> LOCATION: (57)..(557)
     30 <220> FEATURE:
     31 <221> NAME/KEY: sig_peptide
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     34 <220> FEATURE:
     35 <221> NAME/KEY: mat_peptide
     36 <222> LOCATION: (60)..(557)
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     41                                                                   -1
     43 tgc tgg aga ccc ctg tgt cgg ttc ctg tgg ctt tgg tcc tat ctg tct 107
     44 Cys Trp Arg Pro Leu Cys Arg Phe Leu Trp Leu Trp Ser Tyr Leu Ser
     45  1               5                  10                  15
     47 tat gtt caa gca gtg cct atc cag aaa gtc cag gat gac acc aaa acc 155
     48 Tyr Val Gln Ala Val Pro Ile Gln Lys Val Gln Asp Asp Thr Lys Thr
     49             20                  25                  30
     51 ctc atc aag acc att gtc acc agg atc aat gac att tca cac acg cag 203
     52 Leu Ile Lys Thr Ile Val Thr Arg Ile Asn Asp Ile Ser His Thr Gln
     53         35                  40                  45
     56 tcg gta tcc gcc aag cag agg gtc act ggc ttg gac ttc att cct ggg 251
     57 Ser Val Ser Ala Lys Gln Arg Val Thr Gly Leu Asp Phe Ile Pro Gly
     58     50                  55                  60
     60 ctt cac ccc att ctg agt ttg tcc aag atg gac cag act ctg gca gtc 299
     61 Leu His Pro Ile Leu Ser Leu Ser Lys Met Asp Gln Thr Leu Ala Val
     62 65                  70                  75                  80
     64 tat caa cag gtc ctc acc agc ctg cct tcc caa aat gtg ctg cag ata 347
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RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/049,182

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Input Set : A:\36667.txt
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66                   85                  90                  95
68 gcc aat gac ctg gag aat ctc cga gac ctc ctc cat ctg ctg gcc ttc   395
69 Ala Asn Asp Leu Glu Asn Leu Arg Asp Leu Leu His Leu Leu Ala Phe
70             100             105             110
72 tcc aag agc tgc tcc ctg cct cag acc agt ggc ctg cag aag cca gag   443
73 Ser Lys Ser Cys Ser Leu Pro Gln Thr Ser Gly Leu Gln Lys Pro Glu
74         115                 120                 125
76 agc ctg gat ggc gtc ctg gaa gcc tca ctc tac tcc aca gag gtg gtg   491
77 Ser Leu Asp Gly Val Leu Glu Ala Ser Leu Tyr Ser Thr Glu Val Val
78     130                 135                 140
80 gct ttg agc agg ctg cag ggc tct ctg cag gac att ctt caa cag ttg   539
81 Ala Leu Ser Arg Leu Gln Gly Ser Leu Gln Asp Ile Leu Gln Gln Leu
82 145                 150                 155                 160
84 gat gtt agc cct gaa tgc tgaagtttca aaggccacca ggctcccaag           587
85 Asp Val Ser Pro Glu Cys
86                 165
88 aatcatgtag agggaagaaa ccttggcttc caggggtctt caggagaaga gagccatgtg 647
90 cacacatcca tcattcattt ctctccctcc tgtagaccac ccatccaaag gcatgactcc 707
92 acaatgcttg actcaagtta tccacacaac ttcatgagca caaggagggg ccagcctgca 767
94 gaggggactc tcacctagtt cttcagcaag tagagataag agccatccca tcccctccat 827
96 gtcccacctg ctccgggtac atgttcctcc gtgggtacac gcttcgctgc ggcccaggag 887
98 aggtgaggta gggatgggta gagcctttgg gctgtctcag agtctttggg agcaccgtga 947
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102 tttattctgc attctatttt ggatggatct gaagcaaggc atcagctttt tcaggctttg 1067
104 ggggtcagcc aggatgagga aggctcctgg ggtgctgctt tcaatcctat tgatgggtct 1127
106 gcccgaggca aacctaattt ttgagtgact ggaaggaagg ttgggatctt ccaaacaaga 1187
108 gtctatgcag gtagcgctca agattgacct ctggtgactg gtttttgtttc tattgtgact 1247
110 gactctatcc aaacacgttt gcagcggcat tgccgggagc ataggctagg ttattatcaa 1307
112 aagcagatga attttgtcaa gtgtaatatg tatctatgtg cacctgaggg tagaggatgt 1367
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118 gacaaaggag ttgactcttt ccggaacatt tggagtgtac caggcaccct tggaggggct 1547
120 aaagctacag gccttttgtt ggcatattgc tgagctcagg gagtgagggc cccacatttg 1607
122 agacagtgag ccccaagaaa agggtccctg gtgtagatct ccaaggttgt ccagggttga 1667
124 tctcacaatg cgtttcttaa gcaggtagac gtttgcatgc caatatgtgg ttctcatctg 1727
126 attggttcat ccaaagtaga accctgtctc ccacccattc tgtgggggagt tttgttccag 1787
128 tgggaatgag aaatcactta gcagatggtc ctgagccctg ggccagcact gctgaggaag 1847
130 tgccagggcc ccaggccagg ctgccagaat tgcccttcgg gctggaggat gaacaaaggg 1907
132 gcttgggttt ttccatcacc cctgcaccct atgtcaccat caaactgggg ggcagatcag 1967
134 tgagaggaca cttgatggaa agcaatacac tttaagactg agcacagttt cgtgctcagc 2027
136 tctgtctggt gctgtgagct agagaagctc accacataca tataaaaatc agaggctcat 2087
138 gtccctgtgg ttagacccta ctcgcggcgg tgtactccac cacagcagca ccgcaccgct 2147
140 ggaagtacag tgctgtcttc aacaggtgtg aaagaacctg agctgagggt gacagtgccc 2207
142 aggggaaccc tgcttgcagt ctattgcatt tacataccgc atttcagggc acattagcat 2267
144 ccactcctat ggtagcacac tgttgacaat aggacaaggg ataggggttg actatccctt 2327
146 atccaaaatg cttgggacta gaagagtttt ggattttaga gtcttttcag gcataggtat 2387
148 atttgagtat atataaaatg agatatcttg gggatggggc ccaagtataa acatgaagtt 2447
150 catttatatt tcataatacc gtatagacac tgcttgaagt gtagttttat acagtgtttt 2507
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152 aaataacgtt gtatgcatga aagacgtttt tacagcatga acctgtctac tcatgccagc 2567
154 actcaaaaac cttgggtttt tggagcagtt tggatcttgg gttttctgtt aagagatggt 2627
156 tagcttatac ctaaaaccat aatggcaaac aggctgcagg accagactgg atcctcagcc 2687
158 ctgaagtgtg cccttccagc caggtcatac cctgtggagg tgagcgggat caggttttgt 2747
160 ggtgctaaga gaggagttgg aggtagattt tggaggatct gagggc                2793
163 <210> SEQ ID NO: 2
164 <211> LENGTH: 167
165 <212> TYPE: PRT
166 <213> ORGANISM: Murine

168 <400> SEQUENCE: 2
169 Met Cys Trp Arg Pro Leu Cys Arg Phe Leu Trp Leu Trp Ser Tyr Leu
170  -1   1                   5                  10                  15
172 Ser Tyr Val Gln Ala Val Pro Ile Gln Lys Val Gln Asp Asp Thr Lys
173                  20                  25                  30
175 Thr Leu Ile Lys Thr Ile Val Thr Arg Ile Asn Asp Ile Ser His Thr
176                  35                  40                  45
178 Gln Ser Val Ser Ala Lys Gln Arg Val Thr Gly Leu Asp Phe Ile Pro
179              50                  55                  60
181 Gly Leu His Pro Ile Leu Ser Leu Ser Lys Met Asp Gln Thr Leu Ala
182      65                  70                  75
184 Val Tyr Gln Gln Val Leu Thr Ser Leu Pro Ser Gln Asn Val Leu Gln
185  80                  85                  90                  95
187 Ile Ala Asn Asp Leu Glu Asn Leu Arg Asp Leu Leu His Leu Leu Ala
188                  100                 105                 110
190 Phe Ser Lys Ser Cys Ser Leu Pro Gln Thr Ser Gly Leu Gln Lys Pro
191              115                 120                 125
193 Glu Ser Leu Asp Gly Val Leu Glu Ala Ser Leu Tyr Ser Thr Glu Val
194              130                 135                 140
196 Val Ala Leu Ser Arg Leu Gln Gly Ser Leu Gln Asp Ile Leu Gln Gln
197      145                 150                 155
199 Leu Asp Val Ser Pro Glu Cys
200 160                 165
203 <210> SEQ ID NO: 3
204 <211> LENGTH: 700
205 <212> TYPE: DNA
206 <213> ORGANISM: Homo sapiens

208 <220> FEATURE:
209 <221> NAME/KEY: CDS
210 <222> LOCATION: (46)..(546)
212 <220> FEATURE:
213 <221> NAME/KEY: sig_peptide
214 <222> LOCATION: (46)..(48)
216 <220> FEATURE:
217 <221> NAME/KEY: mat_peptide
218 <222> LOCATION: (49)..(546)
220 <220> FEATURE:
221 <223> OTHER INFORMATION: Human ob (leptin) where N represents adenine or
222        guanine or cytosine or thymine
224 <400> SEQUENCE: 3
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RAW SEQUENCE LISTING   DATE: 02/25/2002
PATENT APPLICATION: US/10/049,182   TIME: 10:48:27

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Output Set: N:\CRF3\02252002\J049182.raw

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W--> 225 nnngnngttg caaggcccaa gaagcccann ntcctgggaa ggaaa atg cat tgg gga  57
     226                                                       Met His Trp Gly
     227                                                        -1   1
     229 acc ctg tgc gga ttc ttg tgg ctt tgg ccc tat ctt ttc tat gtc caa     105
     230 Thr Leu Cys Gly Phe Leu Trp Leu Trp Pro Tyr Leu Phe Tyr Val Gln
     231         5                   10                  15
     233 gct gtg ccc atc caa aaa gtc caa gat gac acc aaa acc ctc atc aag     153
     234 Ala Val Pro Ile Gln Lys Val Gln Asp Asp Thr Lys Thr Leu Ile Lys
     235  20                  25                  30                  35
     237 aca att gtc acc agg atc aat gac att tca cac acg cag tca gtc tcc     201
     238 Thr Ile Val Thr Arg Ile Asn Asp Ile Ser His Thr Gln Ser Val Ser
     239                      40                  45                  50
     241 tcc aaa cag aaa gtc acc ggt ttg gac ttc att cct ggg ctc cac ccc     249
     242 Ser Lys Gln Lys Val Thr Gly Leu Asp Phe Ile Pro Gly Leu His Pro
     243              55                  60                  65
     245 atc ctg acc tta tcc aag atg gac cag aca ctg gca gtc tac caa cag     297
     246 Ile Leu Thr Leu Ser Lys Met Asp Gln Thr Leu Ala Val Tyr Gln Gln
     247          70                  75                  80
     249 atc ctc acc agt atg cct tcc aga aac gtg atc caa ata tcc aac gac     345
     250 Ile Leu Thr Ser Met Pro Ser Arg Asn Val Ile Gln Ile Ser Asn Asp
     251          85                  90                  95
     253 ctg gag aac ctc cgg gat ctt ctt cac gtg ctg gcc ttc tct aag agc     393
     254 Leu Glu Asn Leu Arg Asp Leu Leu His Val Leu Ala Phe Ser Lys Ser
     255 100                 105                 110                 115
     257 tgc cac ttg ccc tgg gcc agt ggc ctg gag acc ttg gac agc ctg ggg     441
     258 Cys His Leu Pro Trp Ala Ser Gly Leu Glu Thr Leu Asp Ser Leu Gly
     259                 120                 125                 130
     261 ggt gtc ctg gaa gct tca ggc tac tcc aca gag gtg gtg gcc ctg agc     489
     262 Gly Val Leu Glu Ala Ser Gly Tyr Ser Thr Glu Val Val Ala Leu Ser
     263                 135                 140                 145
     265 agg ctg cag ggg tct ctg cag gac atg ctg tgg cag ctg gac ctc agc     537
     266 Arg Leu Gln Gly Ser Leu Gln Asp Met Leu Trp Gln Leu Asp Leu Ser
     267             150                 155                 160
W--> 269 cct ggg tgc tgaggccttg aaggtcactc ttcctgcaag gactnacgtt           586
     270 Pro Gly Cys
     271         165
     272 aagggaagga actctggttt ccaggtatct ccaggattga agagcattgc atggacaccc 646
     274 cttatccagg actctgtcaa tttccctgac tcctctaagc cactcttcca aagg         700
     277 <210> SEQ ID NO: 4
     278 <211> LENGTH: 167
     279 <212> TYPE: PRT
     280 <213> ORGANISM: Homo sapiens
     282 <400> SEQUENCE: 4
     283 Met His Trp Gly Thr Leu Cys Gly Phe Leu Trp Leu Trp Pro Tyr Leu
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     286 Phe Tyr Val Gln Ala Val Pro Ile Gln Lys Val Gln Asp Asp Thr Lys
     287                  20                  25                  30
     289 Thr Leu Ile Lys Thr Ile Val Thr Arg Ile Asn Asp Ile Ser His Thr
     290              35                  40                  45
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RAW SEQUENCE LISTING   DATE: 02/25/2002
PATENT APPLICATION: US/10/049,182   TIME: 10:48:27

Input Set : A:\36667.txt
Output Set: N:\CRF3\02252002\J049182.raw

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292 Gln Ser Val Ser Ser Lys Gln Lys Val Thr Gly Leu Asp Phe Ile Pro
293         50                  55                  60
295 Gly Leu His Pro Ile Leu Thr Leu Ser Lys Met Asp Gln Thr Leu Ala
296      65                  70                  75
298 Val Tyr Gln Gln Ile Leu Thr Ser Met Pro Ser Arg Asn Val Ile Gln
299 80                  85                  90                  95
301 Ile Ser Asn Asp Leu Glu Asn Leu Arg Asp Leu Leu His Val Leu Ala
302                 100                 105                 110
304 Phe Ser Lys Ser Cys His Leu Pro Trp Ala Ser Gly Leu Glu Thr Leu
305             115                 120                 125
307 Asp Ser Leu Gly Gly Val Leu Glu Ala Ser Gly Tyr Ser Thr Glu Val
308         130                 135                 140
310 Val Ala Leu Ser Arg Leu Gln Gly Ser Leu Gln Asp Met Leu Trp Gln
311     145                 150                 155
313 Leu Asp Leu Ser Pro Gly Cys
314 160                 165
317 <210> SEQ ID NO: 5
318 <211> LENGTH: 146
319 <212> TYPE: PRT
320 <213> ORGANISM: Mus musculus
322 <220> FEATURE:
323 <223> OTHER INFORMATION: Mature mouse ob (leptin)
325 <400> SEQUENCE: 5
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327   1                 5                  10                  15
329 Ile Val Thr Arg Ile Asn Asp Ile Ser His Thr Gln Ser Val Ser Ala
330             20                  25                  30
332 Lys Gln Arg Val Thr Gly Leu Asp Phe Ile Pro Gly Leu His Pro Ile
333         35                  40                  45
335 Leu Ser Leu Ser Lys Met Asp Gln Thr Leu Ala Val Tyr Gln Gln Val
336     50                  55                  60
338 Leu Thr Ser Leu Pro Ser Gln Asn Val Leu Gln Ile Ala Asn Asp Leu
339 65                  70                  75                  80
341 Glu Asn Leu Arg Asp Leu Leu His Leu Leu Ala Phe Ser Lys Ser Cys
342             85                  90                  95
344 Ser Leu Pro Gln Thr Ser Gly Leu Gln Lys Pro Glu Ser Leu Asp Gly
345             100                 105                 110
347 Val Leu Glu Ala Ser Leu Tyr Ser Thr Glu Val Val Ala Leu Ser Arg
348         115                 120                 125
350 Leu Gln Gly Ser Leu Gln Asp Ile Leu Gln Gln Leu Asp Val Ser Pro
351     130                 135                 140
353 Glu Cys
354 145
357 <210> SEQ ID NO: 6
358 <211> LENGTH: 146
359 <212> TYPE: PRT
360 <213> ORGANISM: Homo sapiens
362 <220> FEATURE:
363 <223> OTHER INFORMATION: Mature human ob (leptin)
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VERIFICATION SUMMARY   DATE: 02/25/2002
PATENT APPLICATION: US/10/049,182   TIME: 10:48:28

Input Set : A:\36667.txt
Output Set: N:\CRF3\02252002\J049182.raw

L:11 M:270 C: Current Application Number differs, Replaced Application Number
L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:225 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:269 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3